



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,118	12/17/2001	Masahiro Yanagi	1614.1205	4188
21171	7590	03/20/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005				LAO, LUN YI
		ART UNIT		PAPER NUMBER
		2677		

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<i>Office Action Summary</i>	Application No.	Applicant(s)
	10/016,118	YANAGI, MASAHIRO
	Examiner	Art Unit
	LUN-YI LAO	2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 07 December 2005.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-3 and 6-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-3 and 6-23 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 17 December 2001 is/are: a)  accepted or b)  objected to by the Examiner.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
    Paper No(s)/Mail Date \_\_\_\_\_  
4)  Interview Summary (PTO-413)  
    Paper No(s)/Mail Date. \_\_\_\_\_  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3 and 6-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al(5,809,433) in view of Jeong et al(6,256,481).

As to claims 1-3 and 6-23, Thompson et al teach an input device input device comprising an antenna(107, 750, 860 or 970) arranged at an upper surface inside the housing(102 or 101) and emitting a radio wave based on input information generated by the input part (keypad)(see figures 1-2, 6-10; abstract; column 2, lines 6-65; column 3, lines 39-41; column 5, lines 50-55 and column 6, lines 21-43). Thompson et al teach the housing(102 or 101) comprising a case; and first upper cover(103)(e.g, first cover, figure 7) is swappable with a second upper cover(e.g. second cover, figure 8)(see figures 1-2; figures 7-10 and column 2, lines 6-33). Thompson et al teach the antenna is arranged inside each of upper covers at an uppermost portion of the housing(102 or 101)(see figures 1-2, 7-10 and column 2, lines 5-35); a communicating part(515)

provided to the case and supplying a transmission signal(placing a call or sending e-mail) to the antenna(107 or 750 or 860 or 970)(see figures 1-3, 7-10; abstract; column 1, lines 46-48; column 2, lines 57-65; column 3, lines 10-20 and lines 39-60); and the antenna(107 or 750 or 860 or 970) is detachably (unfastener) connected to the communicating part (515) by a connector(see figures 1-5, 7-10; column 3, lines 10-68 and column 4, lines 1-57).

Thompson et al fail to disclose a detachable upper cover.

Jeong et al teach a detachable upper cover(200) (see figures 1, 8, 16; abstract and column 6, lines 50-65). It would have been obvious to have modified Thompson et al with the teaching of Jeong et al, since Thompson et al have disclose the cover(103) connected to the housing(101 or 102) by a hinge(see figure 1, 4; column 3, lines 61-68 and column 4, line 1) and a user could be easy to exchange the cover that he/she desired(see figures 7-10).

As to claim 2, Thompson et al(5,809,433) teach the antenna(107, 750 or 860 or 970) is made from a conductive wire rod(e.g. copper)(see figures 7-10 and column 4, lines 6-25).

As to claim 3, Thompson et al teach the antenna(107, 750 or 860 or 970) is formed by printing a conductor(e.g. 648 or 649) on the upper surface inside the housing(101 or 102) (see figures 1-2 and 7-10).

As to claim 6, Thompson et al teach the input part(e.g. 109) is detachably connected to communicating part(515) by connector(see figure 1-3 and column 3, lines 10-20).

As to claims 7-10, Thompson et al does not illustrate the detail of a specific common standard wireless transmitting techniques "USED" such as Amplitude Shift Keying (ASK), Frequency Shift Keying (FSK), Phase Shift Keying (PSK) and Spread Spectrum Communication (SSC) however since he does perform a wireless transmission it is clear he must use some modulation technique and the specific transmitting technique used is clearly not critical to the practice of either Thompson et al or Applicant. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to use any common standard wireless modulation techniques, because Thompson et al gave no indication that the particular common standard wireless modulation technique use would be critical to practice of his invention and again one is always motivated to use standard excepted practices where ever details are missing when implementing the Thompson's invention.

As to claim 12, Thompson et al teach a radio transmitting circuit board(319) that is contained within the inside volume, wherein the antenna(107, 750 or 860 or 970) is a conductive wire rod that is connected to the radio transmitting circuit board(319) at only one end of the conductive wire rod (see figure 1-3, 7-10 and column 3, lines 39-65).

As to claim 13, Thompson et al teach the antenna(107, 750 or 860 or 970) is formed by a printed wiring method on an underside of the upper cover(13)(see figures 1-3; 7-10 and column 3, lines 20-37).

As to claims 20-21, the claim is substantially similar to the claims 1, 11 and 14-15, and would be analyzed as previously discussed with respect to these claim, be considering that the second detachable cover is one of cover showed in figures 7-10.

As to claims 14, 17 and 22, It would have been obvious to have a screw that connect the top and the bottom parts since Thompson et al teach the top connected to the bottom by hinge(see figures 1-4; column 3, lines 61-68 and column 4, line 1).

As to claims 15-16 and 18-19, Thompson et al teach the antenna(107, 750 or 860 or 970) is arranged so as to surround a center portion or a depress keytop of the upper cover(3) (see figures 1-2, 7-10).

3. Claims 1-3 and 6-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ying et al(6,442,400) in view of Jeong et al(6,256,481).

Ying et al teach an input device input device comprising an antenna(40, 42, 52)(see figures 2, 3 and 5) arranged at an upper surface inside the housing(12) and emitting a radio wave based on input information generated by the input part(keypad, 22)(see figures 2, 3, 5; abstract and column 1, lines 33-39). Ying et al teach the housing(12) comprising a case; and first upper cover(14)(e.g. first cover, figure 2) is swappable with a second upper cover(e.g. second cover, figure 3 or figure 5)(see column 3, lines 45-54 and column 4, lines 25-64). Ying et al teach the antenna(40, 42, 52) is arranged inside each of upper covers(14) at an uppermost portion of the housing(12)(see figures 2, 3 and 5); a communicating part provided to the case and supplying a transmission signal(placing a call or sending e-mail) to the antenna(40, 42, 52)(see figures 2, 3, 5; abstract and column 1, lines 18-39); and the antenna(42, 52) is detachably connected to the communicating part by a connector(48 or 58)(see figures 4, 5 and column 4, lines 25-63).

Ying et al fail to disclose a detachable upper cover.

Jeong et al teach a detachable upper cover(200) (see figures 1, 8, 16; abstract and column 6, lines 50-65). It would have been obvious to have modified Ying et al with the teaching of Jeong et al, since Ying et al have disclose the cover(14) connected to the housing(12) by a hinge(26)(see figure 2 and column 3, line 27-43) and a user could be easy to exchange the cover that he/she desired(see figures 2-5).

As to claim 2, Ying et al teach the antenna(40, 42, 52) is made from a conductive wire rod(see figures 2, 3, 5 and column 4, lines 27-30).

As to claim 3, Ying et al teach the antenna(40, 42, 52) is formed by printing a conductor on the upper surface inside the housing(12) (see figures 2, 3, 5 and column 4, lines 27-30).

As to claims 7-10, Ying et al do not illustrate the detail of a specific common standard wireless transmitting techniques "USED" such as Amplitude Shift Keying (ASK), Frequency Shift Keying (FSK), Phase Shift Keying (PSK) and Spread Spectrum Communication (SSC) however since he does perform a wireless transmission it is clear he must use some modulation technique and the specific transmitting technique used is clearly not critical to the practice of either Ying et al or Applicant. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to use any common standard wireless modulation techniques, because Ying et al gave no indication that the particular common standard wireless modulation technique use would be critical to practice of his invention and again one is always motivated to

use standard excepted practices where ever details are missing when implementing the Ying's invention.

As to claim 12, Ying et al teach a radio transmitting circuit board(inherent) that is contained within the inside volume, wherein the antenna(40, 42, 52) is a conductive wire rod that is connected to the radio transmitting circuit board at only one end of the conductive wire rod(45, 48 or 58) (see figures 3-5; column 1, lines 17-39 and column 4, lines 25-65).

As to claim 13, Ying et al teach the antenna(40, 42, 52) is formed by a printed wiring method on an underside of the upper cover(13)(see figures 2, 3, 5 and column 4, lines 25-30).

As to claims 20-21, the claim is substantially similar to the claims 1, 11 and 14-15, and would be analyzed as previously discussed with respect to these claim, be considering that the second detachable cover is one of cover showed in figures 7-10.

As to claims 14, 17 and 22, It would have been obvious to have a screw that connect the top and the bottom parts since Ying et al teach the top connected to the bottom by hinge(see figure 2 and column 3, line 27-33).

As to claims 15-16 and 18-19, Ying et al teach the antenna(40, 42 or 52) is arranged so as to surround a center portion or a depress keytop(22) of the upper cover(14) (see figures 2-5).

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-3 and 6-23 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wang(6,677,903) teach a mobile communication device having an antenna disposed on a cover.

Phillips et al(5,561,437) teach a mobile communication device having an antenna(107) disposed on a cover(103).

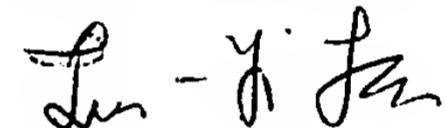
Qi et al(5,966,098) teach a communication device having an antenna(20) disposed on a cover(12).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi Lao whose telephone number is 571-272-7671. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 14, 2006



**Lun-yi Lao**  
**Primary Examiner**